

Claim Amendments

1.(Original) An apparatus comprising:

a backplane comprising

a plurality of slots, the plurality of slots comprising at least one extended slot and at least two normal slots, each normal slot comprising a first set of connectors, each extended slot comprising the first set of connectors and an additional, second set of connectors; and

signal lines connecting the connectors of the extended and normal slots to support at least one data channel between the first set of connectors of each of one or more of the at least one extended slot and the first set of connectors of each of one or more of the at least two normal slots, and to support at least one data channel between the second set of connectors of each of one or more of the at least one extended slot and the first set of connectors of each of one or more of the at least two normal slots.

2.(Original) The apparatus of claim 1, wherein each of the plurality of slots comprises a first set of connectors designed according to a common specification, the common specification comprising Peripheral Component Interconnect Industrial Computer Manufacturers Group 3.0 Advanced Telecommunications Computing Architecture (PICMG 3.0 AdvancedTCA) specification.

3.(Original) The apparatus of claim 2, wherein the first set of connectors includes zone 2 connectors that are compatible with the PICMG 3.0 AdvancedTCA specification.

4.(Original) The apparatus of claim 3, wherein the second set of connectors of each extended slot couple with zone 3 connectors of circuit boards that are compatible with the PICMG 3.0 AdvancedTCA specification.

5.(Original) The apparatus of claim 1, wherein the plurality of slots are spaced apart along a first direction, each slot extending along a second direction at an angle to the first direction, the first and second set of connectors of each extended slot being spaced apart along the second direction.

6.(Original) The apparatus of claim 1, wherein the backplane has a shape that resembles a letter T or an inverted T.

7.(Original) The apparatus of claim 1, further comprising at least two line cards that interface with at least two normal slots.

8.(Original) The apparatus of claim 7, further comprising at least one switch card that interfaces with the at least one extended slot.

9.(Original) The apparatus of claim 8, wherein the line card and the switch card each includes an interface logic to support the data channels between the line card and the switch card.

10.(Original) The apparatus of claim 9, wherein the interface logic includes a serializer/deserializer (SERDES) interface.

11.(Original) The apparatus of claim 10, wherein the signal lines support data channels between the at least two line cards and the at least one switch card to form at least one of a full-mesh, star, dual-star, and dual-dual-star switch fabric topology.

12.(Original) The apparatus of claim 10, wherein the signal lines support data channels between the at least two line cards and the at least one switch card to form

any one of a full-mesh, star, dual-star, and dual dual-star switch fabric topology based on configurations of the line cards and the switch card.

13.(Original) The apparatus of claim 1, wherein the backplane comprises ten normal slots and four extended slots.

14.(Original) The apparatus of claim 1, wherein the backplane comprises twelve normal slots and two extended slots.

15.(Original) The apparatus of claim 1, wherein the signal lines include electric conductors.

16.(Original) The apparatus of claim 1, wherein the signal lines include optical waveguides.

17-30 (Canceled).

31.(New) The apparatus of claim 14, wherein the second set of connectors of the two extended slots and the first set of connectors of the twelve normal slots support additional data channels.

32.(New) The apparatus of claim 1, wherein the connectors of each extended slot and each normal slot comprise one or more differential pairs.

33.(New) The apparatus of claim 1, wherein each of the connectors support one or more ports and each port comprises one or more serializer/deserializers supporting a pre-specified bandwidth.

34.(New) A system comprising
a plurality of slots, the plurality of slots comprising at least one extended slot and a plurality of normal slots, each normal slot comprising a first set of connectors, each extended slot comprising the first set of connectors and a second set of connectors, and

signal lines connecting the connectors of the at least one extended slot and one of the plurality of the normal slots to support at least one data channel between the second set of connectors of the at least one extended slot and the first set of connectors of one of the plurality of normal slots.

35.(New) The system of claim 34 further comprising a plurality of switch cards and a plurality of line cards, wherein the plurality of line cards and the plurality of switch cards are coupled to one of the plurality of slots.

36.(New) The system of claim 34, wherein the plurality of additional data channels enhance bandwidth of switching between the plurality of line cards coupled to the plurality of slots.

37.(New) The system of claim 34, wherein the backplane comprises a total of 14 slots comprising 12 normal slots and 2 extended slots and the signal lines between the second set of connectors of the 2 extended slots and the first set of connectors of the 12 normal slots support an additional 15 data channels.

38.(New) The system of claim 34, wherein the at least one extended slot supports coupling of one of a normal switch card or an extended switch card, the plurality of switch cards comprise the normal switch card and the extended switch card.

39.(New) The system of claim 35, the at least one extended slot supports coupling of one of a normal line card or an extended line card, the plurality of line cards comprise the normal line card and the extended line card.

40.(New) The system of claim 34, wherein the at least one extended slots and the plurality of normal slots are compatible with a common specification, the common specification comprising Peripheral Component Interconnect Industrial Computer

Manufacturers Group 3.0 Advanced Telecommunications Computing Architecture
(PICMG 3.0 AdvancedTCA) specification.